

INVESTMENT SECTION



# COMMONWEALTH OF PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM

ALAN H. VAN NOORD, CFA Chief Investment Officer

October 29, 2012

Dear Members of The PSERS Board of Trustees:

It is a privilege to present to you the Investment Section of the Comprehensive Annual Financial Report for the year ended June 30, 2012.

#### **Authority and Fiduciary Standard**

The Board has the responsibility to invest funds of the System in accordance with guidelines and limitations set forth in the Code and other applicable state law. As fiduciaries, the members of the Board and Staff must act solely in the interests of the members of the System and for the exclusive benefit of the System's members. In performance of their duties, the members of the Board and Staff delegated with investment authority shall be held to the Prudent Investor Standard.

The Prudent Investor Standard, as articulated in the Code, means "the exercise of that degree of judgment, skill and care under the circumstances then prevailing which persons of prudence, discretion and intelligence who are familiar with such matters exercise in the management of their own affairs not in regard to speculation, but in regard to the permanent disposition of the fund, considering the probable income to be derived therefrom as well as the probable safety of their capital."

The Prudent Investor Standard requires a trustee to act prudently and with caution, discretion, loyalty, and care but does not restrict the assets in which the Board can invest. Under the Prudent Investor Standard, which recognizes modern portfolio theory, the Board's investment and management decisions with respect to individual assets shall be considered in the context of the portfolio as a whole and as part of an overall investment strategy, and not in isolation. No specific investment or course of action, taken alone, shall be considered inherently prudent or imprudent. This Standard recognizes the trade-off between risk and return.

#### **Policies and Objectives**

The Board is responsible for the formulation of investment policies for the System. The overall investment objectives of the System are as follows:

**Return Objectives** – the overall return objective is to realize a return sufficient to achieve funding adequacy on an inflation-adjusted basis. Funding adequacy is achieved when the actuarial market value of assets is at least equal to the present value of the System's projected benefit obligations. The System has a return objective of meeting or exceeding the targeted actuarial rate of return of 7.5% over the long-term. In addition, the Board has the following broad objectives:

- 1. The assets of the System shall be invested to maximize the returns for the level of risk taken; and,
- 2. The System shall strive to achieve a return that exceeds the Policy Index (the Policy Index is a custom benchmark, which is based on the Board-established asset allocation structure that seeks to generate a return that meets the actuarial rate of return assumption).

#### **Risk Objectives**

1. The assets of the System shall be diversified to minimize the risk of losses within any one asset class, investment type, industry or sector distribution, maturity date, or geographic location. Failure to do so could impair the

- System's ability to achieve its funding and long-term investment goals and objectives; and,
- 2. The System's assets shall be invested so that the probability of investment losses (as measured by the Policy Index) in excess of 15% in any one year is no greater than 2.5% (or two standard deviations below the expected return).

To achieve these objectives, the Board meets during the first quarter of the calendar year to review the overall asset allocation plan and investment policies for the System. Implementation of investment policies is accomplished through the use of external investment management firms who act as agents for the System and through the use of internal investment managers. The Board also retains various investment consultants to assist with the formulation and implementation of investment policies.

#### **Operations**

The Board, via the Finance Committee, provides oversight of investment activities. The Finance Committee generally conducts seven meetings per year and may meet more frequently as needed. Investment Office staff, as well as external investment advisors and Investment Accounting staff, assist the Board in achieving investment objectives and monitoring compliance with investment policies. For the fiscal year ended June 30, 2012, Wilshire Associates Incorporated (Wilshire) served as the general investment consultant to assist the Board in formalizing investment objectives, establishing an asset allocation plan, conducting investment advisor searches, reviewing performance, and commenting on compliance with investment policies. In addition, the Board utilized Aksia, LLC as an absolute return consultant, Courtland Partners, Ltd. as a real estate consultant, and Portfolio Advisors, LLC as an alternative investment consultant. Alternative investments generally consist of investments in private debt, private equity, and venture capital limited partnerships. Investment Office staff implement the investment decisions within the guidelines established in the Investment Policy Statement, Objectives and Guidelines regarding asset allocation, manager selection, security selection, and other objectives directed by the Board.

The Board employs both external investment management firms and internal investment managers to manage the investment portfolio of the System. At fiscal year end, 54 external public market investment management firms were managing \$14.4 billion in assets of the System, \$14.7 billion in assets were managed by the System's internal investment managers, and the remaining \$19.4 billion in assets were managed by numerous emerging, alternative investment, and real estate investment managers. The performance of each external investment management firm and each internal manager is monitored quarterly against a pre-established benchmark as well as the performance of the manager's peer group.

#### **Asset Allocation**

The Board reviews the long-term asset allocation targets of the System during the first quarter of each calendar year. The Board will consult with its actuary, consultants, Investment Office staff, and other sources of information it deems appropriate in formulating the asset allocation plan. The Board believes that the level of risk assumed by the System is largely determined by the Board's strategic asset allocation plan. The Board, in determining its long-term asset allocation, shall take the following factors into consideration:

- The System's investment time horizon;
- The demographics of the plan participants and beneficiaries;
- The cash flow requirements of the System;
- The actuarial assumptions approved by the Board;
- The funded status of the System;
- The Board's willingness and ability to take risk; and,
- The employers' (Commonwealth and school districts) financial strength.

In establishing the asset allocation for the System, the Board considers capital market expectations for expected return, volatility, and asset class correlations as prepared by its general investment consultant. The current long-term, top-down asset allocation targets of the Board are discussed in the following paragraphs.

The long-term target allocation as of June 30, 2012 included an equity target allocation of 21.5% consisting of publicly traded stocks. Specific targets have been established for U.S. equity exposure (10.3%) and non-U.S. equity exposure

(11.2%). Within the U.S. equity target, the portfolios are diversified between large, small, and micro capitalization investment managers, and growth and value investment managers. The non-U.S. equity exposure includes both developed and emerging markets portfolios as well as large and small capitalization investment managers.

The fixed income target allocation of 26.3% consisted of U.S. core fixed income exposure (5.3%), leveraged Treasury Inflation-Protected Securities exposure (5.0%), high yield exposure (6.0%), emerging markets fixed income exposure (2.0%), non-U.S. fixed income exposure (3.0%), and cash (5.0%). The Board, Staff, and Wilshire deemed it prudent to have an allocation to cash given the known and potential cash flow requirements of the System. Within these categories, all sectors of the bond market are represented.

The real estate target allocation of 12.2% consisted primarily of limited partnerships. The types of partnerships the System invests in include core, value-added, and opportunistic real estate limited partnerships.

Alternative investments had a target allocation of 22.0%. The primary vehicle used to invest funds in this asset class is the limited partnership. The partnerships are established by individual management groups that have been selected by the System for the purpose of investing in and managing private equity, venture capital, and unlisted subordinated debt positions on behalf of PSERS and other limited partners.

The absolute return target allocation of 12.0% consisted primarily of investment managers retained by the System to generate positive returns over time and be independent of how the equity, fixed income, and commodity markets perform. Strategies implemented to achieve this target include, but are not limited to, global macro, commodity trading advisors (CTAs), currency, and relative value strategies such as insurance-linked securities and credit long/short. The absolute return program is included in the allocation to generate returns equal to or greater than the targeted actuarial rate of return of 7.5% and to diversify the System's total portfolio risk.

The commodities target allocation of 6.0% consisted primarily of commodity futures and commodity related publicly traded stocks. Commodities are included in the allocation to diversify the System's total portfolio risk.

#### **Investment Results**

As of June 30, 2012, the fair value of the investment portfolio was \$48.5 billion, a decrease of \$3.3 billion from last year's value. This decrease was primarily due to net investment income (\$1.1 billion) less the deductions for benefits and administrative expenses exceeding member and employer contributions (\$3.7 billion) less net changes in other investment assets and liabilities (\$0.7 billion). The investment portfolio, as invested, was composed of 23.0% common and preferred stocks (equity), 23.2% fixed income investments, 22.0% alternative investments, 12.8% real estate, 12.6% absolute return portfolios, 4.4% commodities, 0.5% master limited partnership, and 1.5% risk parity at June 30, 2012. The table immediately following this letter illustrates a more detailed description of the investment portfolio's asset classes in dollars and as a percentage of the total investment portfolio.

The past few years, including this past fiscal year, have been characterized by slow global economic growth and episodic "risk-on" and "risk-off" periods. Equity market performance appears to be more and more driven by policy decisions made by sovereign governments and central banks around the world rather than economic performance. As these entities become more accommodating, equity markets will go through risk-on periods such as the fourth quarter 2011 and first quarter 2012 when the Morgan Stanley (MSCI) All-Country World Investable Market Index with USA gross (ACW IMI Index) was up 7.42% and 12.21%, respectively. The announcement on September 21, 2011 of the Federal Reserve's "Operation Twist" strategy (a plan to sell short-term notes and purchase long-term Treasuries to reduce interest rates), and the meetings of European Union leaders to take steps in addressing the economic woes threatening the existence of the Euro, were catalysts for the fourth quarter 2011 rally. The first quarter 2012 rally was primarily driven by the European Central Bank's \$1.2 trillion long-term refinancing operating (LTRO) program which provided liquidity to European banks with some money going to European peripheral countries with stressed bond markets. As governments and central banks around the world become less accommodating, equity markets go through risk-off periods such as the third quarter of 2011 and the second quarter of 2012 when the MSCI ACW IMI Index was down 17.89% and 5.61%, respectively. In the U.S., the equity markets incurred steep losses during the third quarter of 2011 as the result of a bitter and partisan U.S. debt ceiling debate which ultimately ended with an increase in the debt ceiling and led Standard & Poor's to downgrade the credit rating of United States government debt from AAA to

AA+. In Europe, debt problems continued to plague the peripheral countries and demands for austerity measures in the Europene dampened growth forecasts and hurt equity markets in Europe.

U.S. economic activity as represented by the U.S. Gross Domestic Product (GDP) has been fairly tepid during the past fiscal year with the exception of a slight pickup in the fourth quarter of 2011. The U.S. real GDP increased by 1.3%, 4.1%, 2.0%, and 1.7% in the third quarter 2011, fourth quarter 2011, first quarter 2012, and second quarter 2012, respectively. The official unemployment rate (otherwise known as the U3 unemployment rate) fell during the fiscal year from 9.1% as of June 2011 to 8.2% as of June 2012, but three years into an economic recovery the rate still remains elevated relative to past recoveries. The more encompassing U6 unemployment rate, which measures not only people without work seeking full-time employment (U3 unemployment rate) but also counts "marginally attached workers and those working part-time for economic reasons" remains elevated at 14.9% as of fiscal year end, down from 16.2% at the end of the last fiscal year but significantly above the low point over the past 10 years of 7.9% in December 2006. One potential positive for the U.S. economy going forward is the apparent stabilization of the U.S. housing market as measured by the S&P Case-Shiller 20-City Home Price Index which is up slightly since last June and is up 3.56% since its January 2012 lows. The remainder of 2012 and 2013, however, face potentially significant headwinds, including the November presidential election, the impending expiration of tax cuts in 2013, and a potentially acrimonious debate over increasing the U.S. debt ceiling.

Internationally, the markets have been driven by both the continuing European debt crisis as well as a significant deceleration of growth in China. The European debt crisis continues to have the potential to be one of the largest debt crises in history. Countries in the periphery of Europe, including Greece, Portugal, Ireland, Spain, and Italy have tremendous amounts of debt and have required, in various degrees, rescue packages from the European Central Bank and International Monetary Fund. Conditions of support from these rescue packages include implementation of austerity measures which require each of these countries to either increase taxes or decrease government spending, both of which will have a negative impact on economic growth. The funding gaps in these countries have the potential to be economically destabilizing to world growth. In addition, severe austerity measures in the countries have the potential to be both politically and socially destabilizing. In China, real GDP has decelerated from 9.5% in the second quarter of 2011 to 7.6% in the second quarter of 2012. As a large and growing engine for world growth, the economic slow-down in China has caused global concerns.

With the continued backing of accommodative monetary and fiscal policies during the past fiscal year, there was, on net, a modest increase in risk assets worldwide which led to positive returns in most asset classes. The MSCI U.S. Investible Market Index, a U.S. equity index, returned 3.34% during the fiscal year. Returns for the second and third quarters of the fiscal year were exceptionally strong, posting an 11.95% and 12.76% return, respectively. Returns for the first and fourth quarters of the fiscal year were negative, posting -15.32% and -3.33%, respectively. Foreign markets in U.S. dollar terms were much weaker as the MSCI All-Country World (ACW) ex. U.S. Investable Market Index, an international equity index, returned -14.79% for the fiscal year, driven primarily by currency weakness versus the U.S. dollar as well as weaker economic conditions. The Venture Economics median return, a benchmark for alternative investments that represents the median performance of the venture capital/private equity industry listed in the Investment Benchmark Reports on Venture Capital and Buy-outs produced by Venture Economics, returned 5.97% for the fiscal year (reported on a one-quarter lag) as these investments were written up to prices comparable to gains in the public equity markets.

Commodity markets performed very poorly in this environment as slowing global growth overshadowed loose monetary policy while inflationary conditions were not evident. For the fiscal year, the Dow Jones UBS Commodity Index, an index composed of futures contracts on 19 physical commodities weighted to account for economic significance and market liquidity, was down 14.32%.

Fixed income markets were generally positive in this environment as interest rates, while volatile during the year, fell and investors continued to take advantage of wide credit spreads in search of yield. For the fiscal year, the Barclays U.S. Universal Index, a U.S. fixed income index, was up 7.35% as the yield curve fell from the June 2011 level. The Barclays Multiverse Index, a global fixed income index, was up 2.79% driven primarily by falling interest rates offset somewhat by weakening currencies against the U.S. dollar. The Barclays High Yield Index returned 7.27% during the past fiscal year due to a tightening of credit spreads as investors continued to bid up credit in search of yield. The Barclays U.S. TIPS Index, an index of U.S. treasury inflation protection securities, driven by falling real yields, returned 11.66% for the fiscal year.

To benchmark real estate performance, the System uses the National Council of Real Estate Investment Fiduciaries / Townsend Fund (NTF) Index, a quarterly time series of real estate partnership portfolios used to simulate the universe of core, value-added and opportunistic real estate partnerships. The indexes are designed to reflect the performance of funds available to U.S. institutional investors, including private real estate/equity-oriented investments, without regard to geographic location. The NTF Index returned 10.51% during the past fiscal year. Index returns are reported on a quarter lag due to the time taken to acquire this information from private market sources, so this return is for the twelve months ended March 31, 2012. Investment performance in the private real estate markets have continued rebounding from significant declines sustained during the credit crisis in 2008.

The absolute return program had a positive but below target fiscal year generating a total return of 2.72%, 478 basis points under its target return of 7.50%. Weak performance from the currency managers who have been whipsawed by markets increasingly driven by policy decisions significantly detracted from returns during the fiscal year. The absolute return program is structured to have low beta to the equity, fixed income, and commodity markets and to provide additional diversification from the remainder of the asset allocation.

For the one-year period ended June 30, 2012, the System generated a total net of fee return of 3.43%. This return exceeded the total fund Policy Index return of 1.98% by 145 basis points. Annualized total net of fee returns for the three-, five-, and ten-year periods ended June 30, 2012 were 12.57%, 0.37%, and 7.19%, respectively. The five-year return ended June 30, 2012 fell short of the total fund Policy Index return by 22 basis points while the three- and ten-year returns ended June 30, 2012 exceeded the total fund Policy Index returns by 263 and 107 basis points, respectively.



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Wilshire calculates the total investment return of the System as well as the performance of each external investment management firm and each internal investment manager retained by the Board to invest the System's assets. Performance is calculated using a time-weighted return methodology.

The following table provides the System's total investment return for each major asset class and the total portfolio, including, where applicable and available, respective benchmark indexes used by asset class and median performance by asset class:

	Aı	Annualized Total Returns (%) Net of Fees		
		<b>Ended June 30, 2012</b>		
	1 Year	3 Years	5 Years	10 Years
PSERS Total Portfolio	3.43	12.57	0.37	7.19
Total Fund Policy Index	1.98	9.94	0.59	6.12
Median Public Defined Benefit Plan (DBP) Fund Universe (Wilshire Database)	1.73	12.16	1.52	6.57
PSERS U.S. Equity Portfolios	3.62	17.60	-0.20	5.55
U.S. Equity Policy Index (1)	3.34	16.26	0.20	5.92
Median Public DBP Fund Universe - U.S. Equities (Wilshire Database)	2.67	16.56	0.19	5.62
PSERS Non-U.S. Equity Portfolios	-13.14	9.24	-2.62	8.26
MSCI All-Country World ex. U.S. Investable Market Index (2)	-14.79	7.36	-3.79	7.30
Median Public DBP Fund Universe - Non-U.S. Equities (Wilshire Database)	-13.23	7.84	-5.43	6.04
PSERS U.S. Fixed Income Portfolios	10.64	14.44	9.84	7.96
U.S. Fixed Income Policy Index (3)	8.53	11.90	9.93	7.16
Median Public DBP Fund Universe - U.S. Bonds (Wilshire Database)	7.84	9.95	7.35	6.19
PSERS Global Fixed Income Portfolios	11.90	9.85	8.05	7.60
Global Fixed Income Policy Index (4)	9.95	9.84	6.91	6.70
Median Public DBP Fund Universe - Global Bonds (Wilshire Database)	9.93	9.73	8.05	7.81
PSERS Commodity Portfolios	7.35	7.96	-2.15	N/A
Dow Jones-UBS Commodity Index	7.16	3.49	-3.65	N/A
PSERS Absolute Return Portfolios	6.19	10.36	N/A	N/A
Benchmark - 7.5% Annualized Return	7.50	7.83	N/A	N/A
PSERS Real Estate (5)	7.96	4.99	-8.86	6.33
Blended Real Estate Index (6)	10.51	8.46	2.38	8.71
Median Public DBP Fund Universe - Real Estate (Wilshire Database)	10.64	10.24	-1.58	6.76
PSERS Alternative Investments (5)	9.35	16.65	6.59	12.96
Venture Economics Median Return, Vintage Year Weighted	5.97	10.07	3.58	5.10
Median Public DBP Fund Universe - Private Equity (Wilshire Database)	9.60	18.45	7.05	12.46

- 1. MSCI USA Investable Market Index effective April 1, 2009; previously was the Dow Jones Wilshire 5000 Index.
- 2. MSCI All Country World (ACW) ex. USA Investable Market Index effective July 1, 2008; previously was the MSCI ACW ex. U.S. Index. The benchmark was 30% hedged to the U.S. dollar from July 1, 2006 to March 31, 2009; otherwise, the benchmark is unhedged.
- 3. Returns presented are a blend of the Barclays Capital U.S. Aggregate Index (32.3%), Barclays Capital U.S. TIPS Index (Series –L) (30.8%), and Barclays Capital U.S. High Yield Index (36.9%) effective January 1, 2012. The weights to these indexes have varied in previous quarters. Prior to January 1, 2012, the Barclays Capital U.S. Universal Index was used in place of the Barclays Capital U.S. Aggregate Index.
- 4. Returns presented are a blend of the Barclays Capital Global Aggregate GDP-weighted Developed Market ex-U.S. (Unhedged) Index (60%) and Barclays Capital EM Local Currency-Government-MV Weighted (Unhedged)-10% Country Cap Index (40%) effective January 1, 2012. Between April 1, 2010 and December 31, 2011, the Barclays Multiverse Index and the JP Morgan Global Bond Index Emerging Markets Global Diversified (USD Unhedged) Index was used.
- 5. Returns reported on a one-quarter lag, except for publicly traded real estate security investments.
- NTFI Index effective July 1, 2010. The NTFI Index is reported on a one-quarter lag. Between April 1, 2010 and June 30, 2010, the NCREIF Index was used. Previously, returns presented were a blend of the FTSE EPRA/NAREIT Global Real Estate Index and the NCREIF Index.

The System also participates in a securities lending program administered by The Bank of New York Mellon Corporation. This program is designed to provide incremental income to the System by lending securities in the System's portfolio to securities dealers in exchange for either cash collateral, which can be reinvested to generate income, or non-cash collateral plus a cash fee. This program generated \$8.3 million in net gains during the year.

#### **Accomplishments**

The System continued its efforts to diversify its market exposures as the board approved new target allocations to risk parity, master limited partnerships, and U.S. long treasuries which should enable the System to have an improved risk return profile after implementation in fiscal year 2013.

#### **Summary**

The System had a mediocre fiscal year ended June 30, 2012 with returns of 3.43% on an absolute basis but did very well versus the Policy Index (up 1.98%, 1.45% outperformance). Over the past three fiscal years, however, the System returned 12.57% annualized, well in excess of the System's targeted actuarial rate of return of 7.50%. The markets struggled during the past year between "risk-on" and "risk-off" environments. We continue to be concerned about the ever-increasing impact that policy makers such as Central Banks and sovereign governments are having on the performance of assets as opposed to performance being reflective of real economic conditions. We believe that we are in the midst of a challenging period for asset returns as interest rates continue to be anchored close to 0% by the Fed and for numerous other reasons, including the European debt crisis, slowing Chinese growth, the impending U.S. presidential election, the upcoming fiscal cliff and debt ceiling debates in the U.S., Middle East tensions, etc. We also believe that the System's asset allocation, however, is structured to generate a long-term return that meets or exceeds the targeted actuarial rate of return assumption of the System at an acceptable level of risk.

Alan H. Van Noord, CFA Chief Investment Officer

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## Portfolio Summary Statistics Asset Allocation As of June 30, 2012

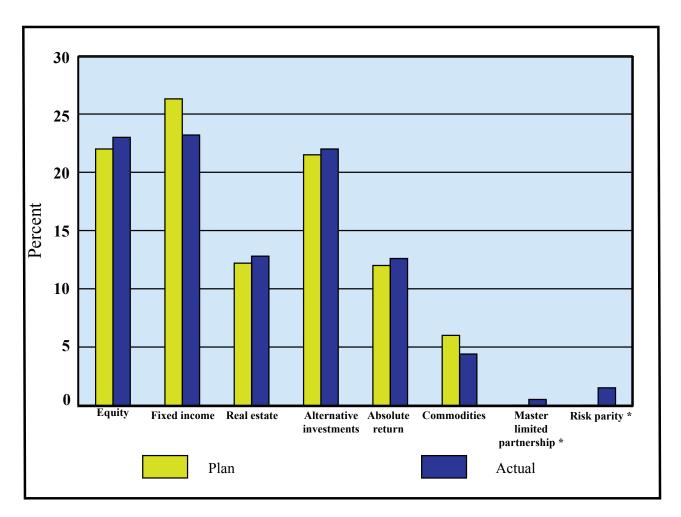
(Dollar Amounts in Thousands)

Pension investments	Fair Value (\$)	% Fair Value
Common and preferred stock (Equity):	-	'
Large cap stocks	3,321,659	6.9
Mid and small cap stocks	1,022,704	2.1
Emerging markets stocks	1,323,439	2.7
Total Non-U.S. equity	5,667,802	11.7
Large cap stocks	3,904,633	8.0
Mid and small cap stocks	1,392,875	2.9
Microcap stocks	189,487	0.4
Total U.S. equity	5,486,995	11.3
<b>Total Common and preferred stock - Asset Allocation Basis</b>	11,154,797	23.0
Fixed income:		
Investment grade fixed income	4,835,601	10.0
High yield fixed income	3,566,642	7.3
Total U.S. Fixed income	8,402,243	17.3
Non-U.S. developed markets fixed income	845,430	1.7
Emerging markets fixed income	881,962	1.8
Total Non-U.S. Fixed income	1,727,392	3.5
Cash and cash equivalents	1,186,599	2.4
Total Fixed income - Asset Allocation Basis	11,316,234	23.2
Real estate	6,192,619	12.8
Alternative investments:		
Private equity	8,054,170	16.6
Private debt	1,713,045	3.5
Venture capital	889,375	1.9
<b>Total Alternative investments - Asset Allocation Basis</b>	10,656,590	22.0
Absolute return	6,114,471	12.6
Commodities	2,112,169	4.4
Master limited partnership	247,645	0.5
Risk parity	736,819	1.5
<b>Total Pension investments - Asset Allocation Basis</b>	48,531,344	100.0
Net Asset Allocation Adjustment*	(213,352)	
Pension investments per Statement of Plan Net Assets	48,317,992	
Postemployment Healthcare investments	222,857	100.0

<sup>\*</sup> Includes reclassifications of certain investments between asset classes and investment receivables\payables to adjust the Statement of Plan Net Assets classification to the basis used to measure Asset Allocation. See the table and graph which follow.

# Comparison of Actual Portfolio Distribution to Asset Allocation Plan As of June 30, 2012

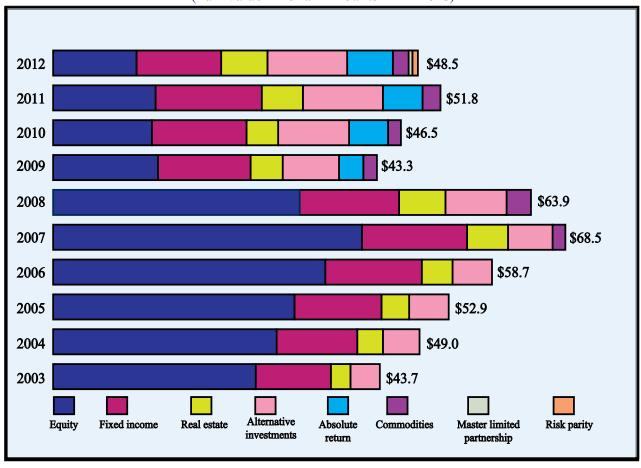
Asset Category	<u>Plan</u>	_Actual_
Common and preferred stock (Equity)	21.5%	23.0%
Fixed income	26.3%	23.2%
Real estate	12.2%	12.8%
Alternative investments	22.0%	22.0%
Absolute return	12.0%	12.6%
Commodities	6.0%	4.4%
Master limited partnership *	-	0.5%
Risk parity *	-	1.5%
Total	100.0%	100.0%



<sup>\*</sup> Represent new asset classes adopted March 9, 2012; plan targets to be effective October 1, 2012.

### Portfolio Distribution 10 Year Trend

(Fair Value - Dollar Amounts in Billions)



The following lists of portfolio detail statistics present the ten largest holdings by descending order of fair value for the largest public market asset classes. Information on the complete holdings of the System is available by writing to the Public School Employees' Retirement System, Press Secretary, 5 N 5th Street, Harrisburg, PA 17101-1905.

## Common and Preferred Stock - Non-U.S. Equity 10 Largest Holdings in Descending Order by Fair Value As of June 30, 2012

(Dollar Amounts and Shares in Thousands)

	No. of	Fair
Description	Shares	Value (\$)
BlackRock Emerging Markets Alpha Advantage Fund Ltd Class D	199	186,120
The 32 Capital Fund Ltd.	98	161,205
BlackRock Emerging Markets Alpha Advantage Fund Ltd Class P	34	94,981
Nestle SA	935	55,871
Royal Dutch Shell PLC	1,489	50,950
BHP Billiton Ltd.	1,546	47,001
IShares Trust MSCI EAFE Index Fund	736	36,775
Shah Capital Offshore Opportunity Fund	415	35,706
Vodafone Group PLC	12,414	34,902
HSBC Holdings PLC	3,804	34,072
Total of 10 Largest Holdings		737,583

# Common and Preferred Stock - U.S. Equity 10 Largest Holdings in Descending Order by Fair Value As of June 30, 2012

(Dollar Amounts and Shares in Thousands)

	No. of	Fair
Description	Shares	Value (\$)
Security Capital Preferred Growth	13,039	185,611
Apple Computer, Inc.	290	169,279
Exxon Mobil Corporation	1,431	122,456
Microsoft Corporation	2,272	69,505
IBM	351	68,558
General Electric Company	3,220	67,102
Chevron Corporation	605	63,816
AT&T Inc.	1,782	63,536
Johnson & Johnson	833	56,260
The Coca-Cola Company	700	54,747
Total of 10 Largest Holdings		920,870

# Fixed Income 10 Largest Holdings in Descending Order by Fair Value As of June 30, 2012

(Dollar Amounts and Shares in Thousands)

Description	Maturity Date	Interest Rate (%)	Par Value(\$) or No. of Shares	Fair Value (\$)
PIMCO Multi-Sector Strategy Fund Ltd.	N/A	N/A	744	751,649
BlackRock US Ext'd Core Global Alpha Bond Fund	N/A	N/A	359	575,935
Bridgewater Int'l Inflation-Linked Bond Fund	N/A	N/A	234	464,368
Bridgewater Pure Alpha Fund II Ltd.	N/A	N/A	140	407,295
Brevan Howard CMBS Fund Ltd.	N/A	N/A	2,000	206,521
Bridgewater U.S. Inflation-Linked Bond Fund	N/A	N/A	75	165,691
U.S. Treasury - Inflation Index	01/15/25	2.375	121,257	159,689
U.S. Treasury - Inflation Index	02/15/41	2.125	90,389	129,003
U.S. Treasury - Inflation Index	02/15/40	2.125	77,063	109,382
Brigade Distressed Value Offshore Fund Ltd.	N/A	N/A	100	103,979
Total of 10 Largest Holdings				3,073,512

# Absolute Return 10 Largest Holdings in Descending Order by Fair Value As of June 30, 2012

(Dollar Amounts and Shares in Thousands)

	No. of	Fair
Description	Shares	Value (\$)
Bridgewater Pure Alpha Fund II Ltd.	291	813,140
Brigade Leveraged Capital Structures Offshore Ltd.	502	689,747
AQR Offshore Multi-Strategy Fund Ltd.	6	615,659
BlackRock Global Ascent Ltd.	427	584,745
Brevan Howard Fund, Ltd.	3,095	374,309
Capula Tail Risk Fund Ltd.	2,619	262,429
Palmetto Fund Ltd. Class G	248	260,146
Black River Fixed Income Relative Value Opportunity Fund Ltd.	250	260,000
BlackRock Capital Structure Investment Fund Ltd.	198	249,195
Blue Trend Fund Limited - Class B	846	236,529
Total of 10 Largest Holdings		4,345,899

# Postemployment Healthcare Investments 10 Largest Holdings in Descending Order by Fair Value As of June 30, 2012

(Dollar Amounts in Thousands)

Description	Maturity Date	Interest Rate (%)	Par Value (\$)	Fair Value (\$)
PSERS Short-Term Investment Fund	Various	Various	110,192	110,192
M & T Bank Repurchase Agreement	07/01/12	0.010	34,183	34,183
M & T Bank Repurchase Agreement	07/01/12	0.010	23,300	23,300
M & T Bank Repurchase Agreement	07/01/12	0.010	11,997	11,997
FNMA Guaranteed REMIC 2004-83 Class HB	08/25/32	5.000	2,570	2,643
FNMA Guaranteed REMIC 2005-83 Class TJ	07/25/31	5.000	2,499	2,528
FHLMC Multiclass 3123 Class HJ	08/15/24	5.000	2,093	2,145
United Parcel Service Inc.	01/15/13	4.500	1,990	2,034
FHLMC Multiclass 3036 Class NC	03/15/31	5.000	2,000	2,033
FHLMC Multiclass 3573 Class MC	07/15/22	4.000	1,894	1,965
Total of 10 Largest Holdings			,	193,020

## Comparison of Investment Activity Income For Fiscal Years Ended June 30, 2012 and 2011

(Dollar Amounts in Thousands)

<b>Investment Activity</b>		2012	2011
Net appreciation in fair value of investments	\$	537,586	\$ 8,614,828
Short-term		10,677	15,128
Fixed income		328,492	383,306
Common and preferred stock		258,258	292,475
Collective trust funds		5,209	4,147
Real estate		170,991	113,370
Alternative investments	-	255,769	 331,286
Total investment activity income	\$	1,566,982	\$ 9,754,540

Brokers' fees on equity investment transactions for the fiscal year ended June 30, 2012 were \$8.0 million. The System has commission recapture contracts with several brokers. These contracts generally stipulate that the brokers rebate a percentage of commissions earned on investment transactions directly to the System. During the fiscal year ended June 30, 2012, the System earned \$42,000 from the commissions recapture program. A list of the brokers receiving fees in excess of \$100,000 during the fiscal year follows:

## Summary Schedule of Brokers' Fees (Cumulative Fiscal Year Amounts Exceeding \$100,000) Fiscal Year Ended June 30, 2012

Broker Name	Fees Paid (\$)	Broker Name	Fees Paid (\$)
Goldman Sachs & Company	1,122,580	Fimat USA	173,291
UBS Securities	558,832	Credit Lyonnais Securities	161,379
Jones & Associates	531,446	Barclays	159,133
Citigroup Global Markets Incorporated	484,197	Cantor, Fitzgerald & Company	158,013
Credit Suisse First Boston	421,219	Liquidnet Incorporated	156,620
JP Morgan Chase & Company	303,833	Adams Harkness & Hill Incorporated	133,391
Merrill Lynch	285,025	B-Trade Services, LLC	118,973
Instinet Corporation	278,847	Nomura Securities International	117,124
Morgan Stanley & Company	229,108	Numis Securities Limited	110,339
Knight Securities	211,896	Deutsche Bank	103,179
Macquaries Equities Limited	189.924		

## Professional Consultants External Investment Advisors As of June 30, 2012

#### **Absolute Return Managers**

- ♦ AQR Capital Management, LLC
- Aeolus Capital Management, Ltd.
- ♦ Black River Asset Management, LLC
- BlackRock Financial Management, Inc.
- ♦ BlueCrest Capital Management, LLC
- ♦ Boston Company Asset Management, LLC (The)
- Brevan Howard Asset Management, LLP
- Bridgewater Associates, Inc.
- ♦ Brigade Capital Management
- ♦ Capula Investment Management, LLP
- Caspian Capital Advisors
- Denali Advisors, LLC
- ◆ FX Concepts, LLC
- ♦ Lazard Asset Management, LLC
- Nephila Capital, Ltd.
- Pacific Investment Management Company
- Pareto Investment Management, Ltd.
- Robeco Investment Management, Inc.

#### **U.S. Equity Managers**

- ♦ AH Lisanti Capital Growth, LLC
- ♦ Conestoga Capital Advisors
- First Pacific Advisors, Inc.
- ♦ Hellman, Jordan Management Company, Inc.
- ♦ NorthPointe Capital, LLC
- Opus Capital Management

#### **Publicly-Traded Real Estate Securities Manager**

♦ Security Capital Research & Management, Inc.

#### Non-U.S. Equity Managers

- Acadian Asset Management, Inc.
- ♦ Baillie Gifford Overseas, Ltd.
- Batterymarch Financial Management, Inc.
- ♦ BlackRock Financial Management, Inc.
- ♦ Glovista Investments, LLC
- John Hsu Capital Group, Inc.
- Marathon Asset Management, LLP
- Oberweis Asset Management, Inc.
- Pyramis Global Advisors, Inc.
- Shah Capital Management, Inc.
- Wasatch Advisors, Inc.
- Wellington Management Company, LLP
- Westwood Global Investments, LLC

#### **Commodity Managers**

- Credit Suisse Asset Management, LLC
- Deutsche Investment Management Americas, Inc.
- ♦ Gresham Investment Management, LLC
- Schroder Investment Management North America
- Wellington Management Company, LLP

#### **U.S. Core Plus Fixed Income Managers**

- BlackRock Financial Management, Inc.
- ◆ Pacific Investment Management Company
- ♦ Piedmont Investment Advisors
- Pugh Capital Management, Inc.
- Western Asset Management Company

#### **U.S. High Yield Fixed Income Managers**

- BlackRock Financial Management, Inc.
- ♦ Brevan Howard Asset Management LLP
- Brigade Capital Management
- ♦ Cerberus Institutional Partners, L.P.
- ◆ LBC Credit Partners
- ♦ MacKay-Shields Financial Corporation
- ♦ Mariner Investment Group, LLC
- Oaktree Capital Management, LP
- Sankaty Advisors, LLC
- ♦ TOP NPL(A), LP
- ◆ TPG Opportunities Partners II, LP

#### Non-U.S. Developed Markets Fixed Income Manager

♦ AllianceBernstein, LP

#### **Emerging Markets Debt Managers**

- Franklin Templeton Investments
- ♦ Stone Harbor Investment Partners, LP

#### **Multi-Sector Fixed Income Manager**

• Pacific Investment Management Company

# Global Treasury Inflation - Protected Securities Manager

Bridgewater Associates, Inc.

#### **Active Currency Hedging Overlay Program Manager**

• Pareto Investment Management, Ltd.

#### Risk Parity Manager

• Bridgewater Associates, Inc.

#### **Master Limited Partnership Advisor**

♦ Harvest Fund Advisors, LLC

#### **Real Estate Advisors**

- Charter Oak Advisors, Inc.
- ♦ GF Management, Inc.

#### **Professional Consultants (Continued)**

- Grosvenor Fund Management US, Inc.
- ♦ L&B Realty Advisors, LLP

#### **Real Estate Partnerships**

- ♦ AG Core Plus Realty Fund III, LP
- ♦ Almanac Realty Securities V & VI, LP
- Apollo Europe Real Estate Fund III, LP
- ♦ Apollo Real Estate Finance Corp.
- Apollo Value Enhancement Fund VII, LP
- ♦ AREFIN Co-Invest Corp.
- ♦ AvalonBay Value Added Fund I & II, LP
- ♦ Avenue Real Estate Fund, LP
- ♦ Beacon Capital Strategic Partners V, LP
- Blackstone Real Estate Partners V, VI, & VII, LP
- Blackstone Real Estate Partners Europe III, LP
- ♦ BPG Investment Partnership V & VI, LP
- ♦ BPG/PSERS Co-Investment Fund, LP
- Broadway Partners Real Estate Fund II & III, LP
- ♦ Cabot Industrial Value Fund III, LP
- ◆ Carlyle Europe Real Estate Partners III-A, LP
- ◆ Carlyle Realty Partners III, IV, V, & VI, LP
- CS Strategic Partners Fund IV RE, LP
- CSFB Strategic Partners II & III RE, LP
- ◆ DRA Growth and Income Fund VI & VII, LLC
- ◆ DLJ Real Estate Capital Partners II, III, & IV, LP
- Exeter Industrial Value Fund II, LP
- Fillmore West Fund, LP
- Fortress Investment Fund I. IV. & V. LP
- Hines U.S. Office Value Added Fund, LP
- ♦ JP Morgan Strategic Property Fund
- Lazard Freres Real Estate Investors I & II, LLC
- ◆ Legg Mason Real Estate Capital I & II, Inc.
- ◆ LCCG Diversified Risk CMBS Fund II, LLC
- ♦ LCCG High Yield CMBS Fund III, LLC
- ♦ LCCG Real Estate Special Situations Mortgage Fund, LLC
- ◆ LEM Real Estate Mezzanine Fund II, LP
- ◆ Lubert-Adler Real Estate Fund II, III, IV, V, VI, & VI-A, LP
- ♦ Madison Marquette Retail Enhancement Fund, LP
- MGPA Asia Fund III, LP
- ♦ MGPA Europe Fund III. LP
- Morgan Stanley Domestic Real Estate Fund IV, LP
- Morgan Stanley Int'l. Real Estate Fund IV, V, & VI, LP
- Morgan Stanley Real Estate Fund II, LP
- Morgan Stanley Real Estate Fund VII Global, LP
- Morgan Stanley Real Estate Fund V US, LP
- O'Connor North American Property Partners I & II, LP
- Paladin Realty Latin America Investors III, LP
- Peabody Global Real Estate Partners
- ♦ PRISA
- ProLogis North American Industrial Fund, LP
- ♦ RCG Longview Debt Fund IV, LP
- ♦ RCG Longview Equity Fund, LP
- Senior Housing Partnership Fund IV, LP
- ♦ Silverpeak Legacy Partners I, II, & III, LP
- Stockbridge Real Estate Fund I, II, & III, LP
- Strategic Partners Value Enhancement Fund, LP
- ◆ UBS (US) Trumbull Property Fund, LP
- Westbrook Real Estate Fund I, LP
- ♦ Whitehall Street Real Estate V, VI, VII, & VIII, LP
- William E. Simon & Sons Realty Partners, LP

#### **Farmland Advisor**

♦ Prudential Agricultural Group

#### **Private Equity/Venture Capital Partnerships**

- ♦ ABS Capital Partners II, LP
- ◆ Actis Emerging Markets 3, LP
- Actis Global 4, LP
- ♦ Adams Capital Management, LP
- ♦ Aisling Capital Partners II & III, LP
- ♦ Allegheny New Mountain Partners, LP
- Apax Europe VII, LP
- ♦ Bain Capital Asia Fund II, LP
- ♦ Baring Asia Private Equity Fund III, IV, & V, LP
- ♦ Blue Point Capital Partners I & II, LP
- ♦ Bridgepoint Capital II, LP
- ♦ Bridgepoint Europe I, II, III, & IV, LP
- Bruckmann, Rosser, Sherrill & Company, LP
- ◆ Capital International Private Equity Fund V & VI, LP
- ◆ Catterton Growth Partners, LP
- ♦ Catterton Partners V & VI, LP
- Clarity Partners I & II, LP
- Co-Investment Fund 2000, LP
- ♦ Co-Investment Fund II, LP
- Coller International Partners VI, LP
- ◆ Credit Suisse Equity Partners, LP
- ◆ Credit Suisse Intl. Equity Partners, LP
- Crestview Partners I & II, LP
- ◆ Cross Atlantic Technology Fund I & II, LP
- ◆ CSFB Strategic Partners II, III-B, & III-VC, LP
- ◆ CS Strategic Partners Fund IV, IV-VC, & V, LP
- ◆ CVC Capital Partners Asia Pacific III, LP
- CVC European Equity Partners V, LP
- ♦ Denham Commodity Partners VI, LP
- ♦ DLJ Merchant Banking Partners III, LP
- ♦ DLJ Strategic Partners, LP
- ♦ Dubin Clark Fund II, LP
- ♦ Edgewater Private Equity Fund III, LP
- ♦ Edgewater Growth Capital Partners, LP
- ♦ Evergreen Pacific Partners I & II, LP
- ◆ First Reserve Fund XI & XII, LP
- Franklin Capital Associates III, LP
- Furman Selz Investors III, LP
- Graham Partners Investments, LPGreen Equity Investors II, LP
- Greenpark International Investors III, LP
- ♦ Greenwich Street Capital Partners II, LP
- Halifax Capital Partners, LP
- ♦ Headland Private Equity Fund 6. LP
- ♦ Incline Equity Partners IV, LP
- ♦ Irving Place Capital Partners II & III, LP
- ♦ Jefferies Capital Partners IV, LP
- ♦ Jefferson Partners Fund IV, LP
- ◆ KBL Healthcare Ventures, LP◆ KKR 2006 Fund, LP
- ♦ KRG Capital Fund II, III, & IV, LP
- ◆ Landmark Equity Partners II, III, IV, V, XIII, & XIV, LP
- ◆ Landmark Mezzanine Partners, LP
- Lexington Capital Partners I, LP
- ♦ Lindsay, Goldberg & Bessemer, LP

#### **Professional Consultants (Continued)**

- ◆ LLR Equity Partners I, II, & III, LP
- ♦ Milestone Partners II, III & IV, LP
- ♦ Morgan Stanley Dean Witter Capital Partners IV, LP
- ♦ Navis Asia Fund V. LP
- ♦ NEPA Venture Fund II, LP
- ♦ New Mountain Partners I & III, LP
- ♦ New York Life Capital Partners I, II, III, & IV, LP
- ♦ NGP Natural Resources X, LP
- ♦ Nordic Capital VII Beta, LP
- ♦ Novitas Capital I & II, LP
- Orchid Asia V, LP
- ◆ P/A Fund (APA/Fostin II) (The)
- ◆ PAI Europe III, IV, & V, LP
- Palladium Equity Partners II-A, LP
- Partners Group Secondary 2008 & 2011, LP
- ♦ Permira IV, LP
- Perseus-Soros Bio-Pharmaceutical Fund, LP
- ♦ Platinum Equity Capital Partners I, II & III, LP
- ♦ PNC Equity Partners I & II, LP
- Providence Equity Partners VI, LP
- Psilos Group Partners III, LP
- Quadrangle Capital Partners I & II, LP
- Quaker BioVentures I & II, LP
- ♦ SCP Private Equity Partners I & II, LP
- ♦ StarVest Partners I & II, LP
- ♦ Sterling Capital Partners, LP
- ♦ Sterling Venture Partners, LP
- ♦ Summit Partners Venture Capital Fund III, LP
- ♦ Summit Partners Growth Equity Fund VIII, LP
- ♦ TDH III, LP
- ◆ Tenaya Capital IV-P & V-P, LP
- ♦ The Fourth Cinven Fund
- ◆ TPG Partners V. & VI. LP
- ♦ Trilantic Capital Partners IV, LP
- ◆ Trilantic Capital Partners V (North America), LP
- ♦ U.S. Equity Partners II, LP
- ♦ Wicks Communications & Media Partners, LP

#### **Private Debt Partnerships**

- ♦ Avenue Asia Special Situations Fund II, III, & IV, LP
- ♦ Avenue Europe Special Situations Fund, LP
- Avenue Special Situations Fund III, IV, V, & VI, LP
- Cerberus Institutional Partners, LP (Series Two, Three, & Four)
- ◆ Cerberus Institutional Partners V, LP
- ♦ Gleacher Mezzanine Fund I & II
- ◆ GSC Recovery II & III, LP
- ♦ GSC Partners CDO Investors IV, LP
- ♦ Gold Hill Venture Lending, LP
- New York Life Investment Management Mezzanine Partners I & II. LP
- ◆ OCM Opportunities Fund VII & VII-B, LP
- ♦ Versa Capital Fund I & II, LP
- ♦ Windjammer Senior Equity Fund III & IV, LP

#### **Alternative Investment Consultant**

♦ Portfolio Advisors, LLC

#### **Custodian Bank and Securities Lending Agent**

The Bank of New York Mellon Corporation

#### **Hedge Fund Consultant**

♦ Aksia, LLC

# **Investment Accounting Application Service Provider**

• Financial Control Systems, Inc.

# **Investment Evaluator and General Investment Consultant**

• Wilshire Associates, Inc.

#### **Proxy Voting Agent**

♦ Glass, Lewis & Co., LLC

#### **Real Estate Investment Consultant**

Courtland Partners, Ltd.



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